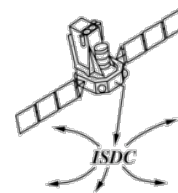


Datacentre aspects

Mathias.Beck@unige.ch

Quick Introduction

Dwarf meeting



MPIfK

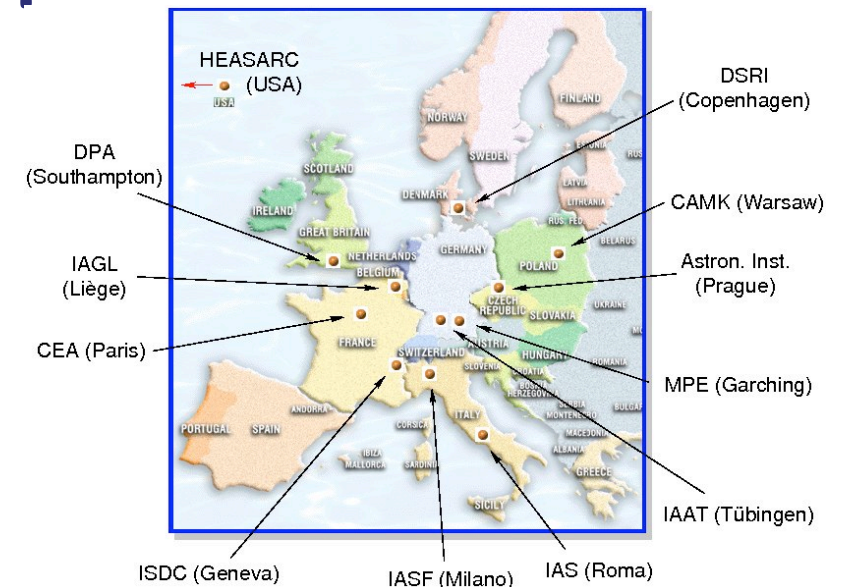


UniHD

Mathias Beck

About INTEGRAL / ISDC

- INTEGRAL ground segment :
MOC, SOC, SDC, IT, SWT,...
- ISDC: Science Data Centre
- Observatory character
- operational 2002 ➡ beyond 2010
- National funding by international consortium of co-investigators



Observatories need to be accessible

- Data/software need to be accessible and usable also by non-experts
- User support should be available (documentation, help desk, schools, help with analysis, visitors program)
- Results should be published rapidly. Data need to become public on a short time scale
- Science alerts should be broadcasted quickly

Data/software need to be accessible and usable also by non specialists

- High level analysis results should be in standard formats, usable with standard analysis packages and data of other missions for now and in the future.
- A data archive with products at different levels should be easily and freely accessible
- Standard high level analysis software
- Mission specific low level analysis software need to be freely available and maintained from day 1 until years after the end of the operations.

FITS : THE astronomy data format

- Astronomers use FITS format
- Adopted by all high-energy mission since the 1980's
- Format specification is published and open
- With time, a series of FITS conventions have been defined for HE mission products e.g. event files. Allows generic analysis software to use data of many missions.
- Data of most past and present mission are available through NASA's HEASARC. Old data are still useful today.
- For INTEGRAL : more than 1300 data templates (tables and images)

Data Archive

- A data archive with products at different levels should be easily and freely accessible
- If possible provide / store all data (low and high level) in the same format (FITS)
- PB scale archives start to exist
- Disk space is getting cheaper and cheaper, especially for low volume data archives
- Interoperability with data from other instruments
 - ➡ Virtual Observatory on its way but not yet with a lot of penetration

Software Integration

- Software integration is important especially in a distributed development environment
- developers deliver modules to the data centre ➡ good unit test coverage
- software version control à la CVS, SVN, GIT
- continuous integration ➡ 'build and test often'
- data centre integrates the individual modules to 'pipelines'

Questions or Comments

